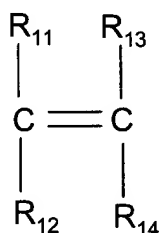


### **REMARKS**

Favorable reconsideration and allowance of the present application are respectfully requested in view of the foregoing amendments and the following remarks.

Currently, claims 42-50, 52-62, and 64-74 are pending, including independent claims 42 and 60. Claims 1-41 were previously cancelled. Claims 42, 48, 49, 52 and 60 have been amended in this paper, while claims 51 and 63 have been cancelled in this paper. Additionally, new claims 69-74 have been added in this paper.

Independent claim 42, for instance, is directed to a soft tissue product that has a relatively low level of lint and slough, wherein the tissue product comprises at least one paper web formed from a cellulosic fibrous material and a flexible binder applied to the paper web. The flexible binder is a copolymer formed from at least the following monomeric constituents: a) an ethylenically unsaturated monomeric constituent; and b) an unsaturated polysiloxane monomeric constituent. The ethylenically unsaturated monomeric constituent in claim 42 contains one or more hydrophobic ethylenically unsaturated monomers having the following formula:



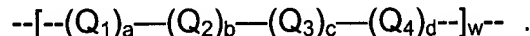
wherein  $R_{14}$  is a hydrophobic group. In claim 42, as amended, the one or more hydrophobic ethylenically unsaturated monomers form greater than about 15% by weight of the total monomer weight of the copolymer. The copolymeric flexible binder of Applicants' claims increases the strength of the claimed tissue product and reduces lint and slough without substantially stiffening the resulting, relatively flexible tissue product. (Appl., p. 8, lines 18-25; p. 9, lines 3-23).

Claims 42-68 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,224,714 to Schroeder, et al. Applicants first respectfully submit that Schroeder, et al. may not be available as prior art to the present application under Section 103(a). However, Applicants bring to the attention of the Examiner International Publication No. WO 00/43440, published on July 27, 2000, which claims

priority to Application Serial No. 09/449,261, the application that matured into U.S. Patent No. 6,224,714 to Schroeder, et al.

Schroeder, et al. is directed to synthetic polymers having groups capable of hydrogen bonding or covalent bonding with the cellulose molecules in fibers, and one or more polysiloxane moieties, wherein the backbone of the synthetic polymers is based on modified vinyl polymers, such as polyvinyl alcohol, polyacrylamides, and polyacrylic acids. Schroeder, et al. states that its combination of synthetic polymers into a single molecule with polysiloxane moieties results in a combined molecule that can provide several potential benefits (i.e., impart two or more distinct product properties to a paper product) where previously two or more different molecules would have been required. (Col. 1, line 49 – col. 2, line 2).

The general formula set forth throughout the disclosure of Schroeder, et al. for its synthetic polymer having hydrogen bonding capability and containing one or more polysiloxane moieties, is the following:

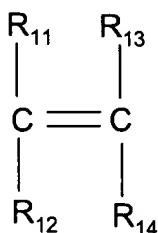


(Col. 2, line 36 – col. 7, line 50). In this general formula,  $Q_1$  is a monomer unit or a block or graft copolymer containing a pendant group capable of forming hydrogen or covalent bonds with cellulose. Preferred pendant groups for hydrogen bonding are  $\text{--CONH}_2$ ,  $\text{--COOH}$ ,  $\text{--COO}^+\text{M}$ ,  $\text{--OH}$ , and mixtures of these groups, while preferred pendant groups for covalent bonding are aldehydes and anhydrides.  $Q_2$  is a block or graft copolymer containing the siloxane bonds ( $\text{--Si R}_A \text{ R}_B \text{ O--}$ ), while  $Q_3$  is a monomer unit or a block or graft copolymer containing a charge functionality.  $Q_4$  is a monomer unit or a block or graft copolymer containing a hydrophilic moiety, which is desirable for making the material into a form suitable for papermaking. The portions of Schroeder, et al. in columns 13 and 14 referred to by the Examiner are merely general descriptions for preparing addition copolymers.

In Schroeder, et al., a constant focus is on providing synthetic polymers that contain pendant groups that can form hydrogen bonds with cellulose molecules in

fibers, thereby increasing interfiber bonding. Specifically, Schroeder, et al. describes its “synthetic polymers” as having a portion of their structure derived from the polymerization of ethylenically unsaturated compounds which contain pendant groups that can form hydrogen bonds, ionic bonds, or covalent bonds with the cellulose materials in fibers, thereby increasing interfiber bonding. (Col. 2, line 36 – col. 3, line 29; col. 2, lines 8-13).

Applicants respectfully submit that Schroeder, et al. does not disclose or suggest the tissue product of Applicants’ independent claims 42 and 60. For instance, Schroeder, et al. does not disclose or suggest a tissue product having a relatively low level of lint and slough, nor does Schroeder, et al. disclose or suggest the particular flexible binder recited in Applicants’ claims. Specifically, the ethylenically unsaturated monomeric constituent of Applicants’ claimed copolymeric flexible binder contains one or more *hydrophobic* ethylenically unsaturated monomers having the formula:



wherein  $R_{14}$  is a *hydrophobic* group. Additionally, in claim 42, the one or more hydrophobic ethylenically unsaturated monomers form greater than about 15% by weight of the total monomer weight of the copolymer. The flexible binder recited in claim 42 is not interacting with the cellulosic fibrous material of the paper web through hydrogen bonding. Rather, the flexible binder of Applicants’ claims is encountering hydrophobic attractive forces when applied to the paper web. This means that the construction and flexibility of the binder contribute to a resulting tissue product that is relatively flexible, where the strength of the tissue product is increased, and lint and slough are reduced, all without substantially stiffening the resulting tissue product. (Appl., p. 8, lines 18-25; p. 9, lines 3-23).

No such flexible binder is taught or suggested by Schroeder, et al. Specifically, Schroeder, et al. does not teach or suggest the copolymeric flexible binder that is applied to the paper web of Applicants’ claimed tissue products, wherein the one or

more hydrophobic ethylenically unsaturated monomers form greater than about 15% by weight of the total monomer weight of the copolymer. Additionally, none of the "Q<sub>1-4</sub>" moieties set forth in Schroeder, et al.'s general formula  $--[(Q_1)_a--(Q_2)_b--(Q_3)_c--(Q_4)_d]_w--$  corresponds to the hydrophobic ethylenically unsaturated monomer(s) present in the copolymeric flexible binder in Applicants' claimed tissue products. Rather, as stated above, the "Q<sub>1-4</sub>" moieties required in the synthetic polymer of Schroeder, et al. are, respectively, (1) a monomer or copolymer containing a pendant group capable of forming hydrogen or covalent bonds with cellulose; (2) a block or graft copolymer containing siloxane bonds; (3) a monomer or copolymer containing a charge functionality; and (4) a monomer or copolymer containing a hydrophilic moiety. Thus, Applicants respectfully submit that independent claims 42 and 60 patentably define over Schroeder, et al.

The dependent claims were also rejected as being unpatentable over the Schroeder, et al. reference discussed in detail above. Applicants respectfully submit, however, that at least for the reasons indicated above relating to corresponding independent claims 42 and 60, the dependent claims patentably define over Schroeder, et al. However, Applicants also note that the patentability of the dependent claims does not necessarily hinge on the patentability of independent claims 42 and 60. In particular, it is believed that some or all of the dependent claims may possess features that are independently patentable, regardless of the patentability of claims 42 and 60.

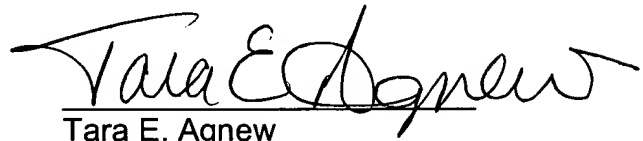
In summary, Applicants respectfully submit that the present claims patentably define over all of the prior art of record for at least the reasons set forth above. As such, it is believed that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner Chin is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Amendment.

Appl. No. 09/943,412  
Amdt. Dated November 2, 2004  
Reply to Final Office Action of July 2, 2004

Please charge any additional fees required by this Amendment to Deposit  
Account No. 04-1403.

Respectfully requested,

DORITY & MANNING, P.A.

A handwritten signature in black ink, appearing to read "Tara E. Agnew". The signature is fluid and cursive, with a horizontal line drawn underneath the name.

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